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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/021,716	11/30/2001	Paul Edward Arch	9220USA-NONP	4655
7590	04/06/2005		EXAMINER	
Suzanne Kikel NOVA Chemicals Inc. 400 Frankford Road Monaca, PA 15061			ZEMEL, IRINA SOPJIA	
			ART UNIT	PAPER NUMBER
			1711	
DATE MAILED: 04/06/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/021,716

Applicant(s)

ARCH ET AL.

Examiner

Irina S. Zemel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 13 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) 27-48 and 50 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 and 49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-50 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continued Prosecution Application

DETAILED ACTION

Claim Rejections - 35 USC § 102/103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-26 and 49 are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over WO 00/15703 to NOVA Chemicals (hereinafter "NOVA").

The rejection of claims stands as per reasons set forth in the Office Action dated 8-20-2004. Newly added limitation to the properties of the claimed foamed particles, i.e., the ability of the claimed particles to be expanded to certain density in a conventional equipment without being additionally impregnated with blowing agent are inherently met by the foamed particles disclosed by NOVA. It appears that the claimed property is inherently exhibited by the disclosed particles because the disclosed particles are made from substantially the same materials, in the same proportions and by similar methods as the claimed particles. Moreover, the reference expressly states that the pre-expanded particles may be further expanded to up to three times the density of the pre-expanded particles

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without being impregnated with additional blowing agent. Since the pre-expanded particles have density as low as 200 kg/m³, expansion of such particles three times inherently results in expanded particles with the density substantially lower than the upper claimed limitation. The burden is shifted to the applicants to provide factual evidence to the contrary, i.e. that the particles disclosed by the reference and containing the disclosed amounts of the blowing agent (2 or 4 %) are not inherently capable of being expanded to the claimed density in any conventional equipment at any conventionally used conditions.

Response to Arguments

Applicant's arguments filed 1-13-2005 have been fully considered but they are not persuasive. In the section "Differences between the Claimed Invention and the Cited Publication" the applicants argue that the "foamed cellular particles of the invention have a blowing agent weight loss at least 15% to 50% lower than that of the expandable particles used to form the foamed cellular particles in the same time at room temperature" Applicants further state that "[A]s explained in the specification, the reason for this is that since the foamed cellular particles are larger than the expandable particles, the mean path for diffusion of the blowing agent through the particle is longer, thereby increasing the shelf life of the foamed cellular particles. (Page 33, lines 26-31.)" Since the foamed particles disclosed by NOVA are larger than the expandable particles and since they are made from substantially the same materials in substantially the same

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proportions, it is not clear how and why the particles disclosed in the reference are different from the claimed particles.

The applicants further argue that the porous particles disclosed in the reference contain less than 2 % of organic blowing agent. This statement is not accurate since even in the preferred embodiments disclosed in the reference the 2% amounts are included, thus overlapping with the broad claims of the instant application. Furthermore, contrary to the applicants statement, the disclosed foamed particles need not to be necessarily impregnated with additional blowing agent and may be further expanded (up to three times the volume or density) without addition of any blowing agent already nor present in the foamed particles. This is, in fact, illustrated in all of the illustrative examples. Further impregnation is only needed for additional expansion of the expanded particles.

While the preferred embodiments include foamed particles with slightly lower amount of the organic blowing agent that is claimed in dependent claims, the reference discloses embodiments where this amount is as high as 4 %, which is fully within the claimed ranges. In the alternative, from the teachings of illustrative and comparative examples, which only differ in the amounts of the blowing agent, one would easily conclude that the amount of the blowing agent governs the final expansion ratio. It would have been clearly within the routine experimentation conducted by an ordinary artisan to adjust the amount of the organic blowing agent to achieve the desired expansion ratio depending on the end use and particular needs for the specific expanded articles\ since this particular parameter is recognized as a result-effective variable, i.e., a variable

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which achieves a recognized result, in the reference. In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977).

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

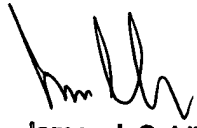
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina S. Zemel whose telephone number is (571)272-0577. The examiner can normally be reached on Monday-Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571)272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ISZ



James J. Seidleck
Supervisory Patent Examiner
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